

REMARKS

Claims 1, 3-5, and 7-11 are pending in the application. Claims 1 and 5 are in independent form, and have been amended hereby. Claims 2 and 6 have been cancelled, without prejudice or disclaimer. New Claims 12-16 have been added. Favorable reconsideration is requested.

Reconsideration is respectfully requested of the rejection of Claims 1, 2, and 4-11 under 35 U.S.C. §103(a), as being obvious over U.S. Patent No. 5,974,807 (“Gao”) in view of U.S. Patent No. 5,878,580 (“Schilling”); and of the rejection of Claims 1-11, as being obvious over U.S. Patent No. 6,434,947 (“Zhu”) in view of Shilling.

Initially, the Office Action concedes that Gao and Zhu fail to teach or suggest a rotary valve with multiple tracks, and cites Schilling for these features.

Although Schilling appears to generally disclose a rotary disc of a disc valve, it is respectfully submitted that Schilling fails to teach or suggest a rotary valve including one track for flow to the regenerator and two tracks for flow to the pulse tubes, where the valve has two high pressure ports to the pulse tubes located on a single track, and two low pressure ports from the pulse tubes located on a separate single track, as recited in amended independent Claim 1.

Further, it is respectfully submitted that Schilling fails to teach or suggest a rotary valve including one track for flow to the regenerator and two tracks for flow to the pulse tubes, where one track of the three tracks permits flow into the first and second pulse tubes, the second of the three tracks permits flow out of the first and second pulse tubes, and the third track permits flow in and out of the regenerator, as recited in amended independent Claim 5.

Accordingly, it is respectfully submitted that amended independent Claims 1 and 5, and the claims depending therefrom, are patentably distinct over the cited references, alone or in any possible combination.

New independent Claim 12, and Claims 13-16 depending therefrom, recite features similar in many respects to the features discussed above with respect to amended independent Claims 1 and 5, and are submitted to be patentably distinct over the cited references for at least the very same reasons.

In view of the amendments and remarks set forth above, this application is believed to be in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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